

## CLAIMS

What is claimed is:

- 1 1. A method of evolving an Extensible Markup Language (XML) Schema, the method  
2 comprising:  
3 receiving, at a schema evolver that is executing in a computer system, a document  
4 that indicates one or more changes to be made to a first XML schema;  
5 based on said first XML schema and said document, said schema evolver generating a  
6 second XML schema; and  
7 based on said second XML schema, generating one or more first Structured Query  
8 Language (SQL) statements.
- 1 2. The method of Claim 1, wherein said first SQL statements, when executed, cause one  
2 or more database object types to be created.
- 1 3. The method of Claim 1, wherein said first SQL statements, when executed, cause one  
2 or more database object tables to be created.
- 1 4. The method of Claim 1, wherein said first SQL statements, when executed, cause one  
2 or more database object types to be deleted.
- 1 5. The method of Claim 1, wherein said first SQL statements, when executed, cause one  
2 or more database object tables to be deleted.
- 1 6. The method of Claim 1, wherein said first SQL statements, when executed, cause one  
2 or more database object types to be altered.

1 7. The method of Claim 1, wherein said first SQL statements, when executed, cause one  
2 or more database object tables to be altered.

1 8. The method of Claim 1, wherein said first SQL statements, when executed, cause one  
2 or more database object instances to be altered.

1 9. The method of Claim 1, wherein said one or more changes are expressed as one or  
2 more instances of one or more XML types specified by a third XML schema.

1 10. The method of Claim 1, further comprising:  
2 generating one or more second SQL statements that, when executed, cause effects of  
3 said one or more first SQL statements to be reversed.

1 11. The method of Claim 10, further comprising:  
2 determining, while executing said one or more first SQL statements, whether an error  
3 has occurred; and  
4 in response to determining that an error has occurred, executing one or more of said  
5 one or more second SQL statements that, when executed, cause effects of said  
6 one or more first SQL statements that have been executed to be reversed.

1 12. A method of generating Structured Query Language (SQL) statements to alter  
2 database types in a database system that has definition data that defines a set of one or  
3 more database object types, the method comprising:  
4 receiving a first Extensible Markup Language (XML) schema; and  
5 based on said first XML schema, generating one or more SQL statements that, when  
6 executed, cause a database server to alter said set of one or more database  
7 object types.

- 1 13. The method of Claim 12, wherein said one or more database object types were  
2 generated based on a second XML schema that differs from said first XML schema.
- 1 14. The method of Claim 13, wherein said first XML schema was generated based on  
2 said second XML schema.
- 1 15. The method of Claim 12, wherein said one or more SQL statements, when executed,  
2 cause said database server to create one or more of said one or more database object  
3 types.
- 1 16. The method of Claim 12, wherein said one or more SQL statements, when executed,  
2 cause said database server to delete one or more of said one or more database object  
3 types.
- 1 17. A method of generating Structured Query Language (SQL) statements to alter  
2 database object instances, the method comprising:  
3 receiving a first Extensible Markup Language (XML) schema; and  
4 based on said first XML schema, generating one or more SQL statements that, when  
5 executed, cause a database server to alter a set of one or more database object  
6 instances.
- 1 18. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 1.

1 19. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 2.

1 20. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 3.

1 21. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 4.

1 22. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 5.

1 23. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 6.

1 24. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 7.

1 25. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 8.

1 26. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 9.

1 27. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 10.

1 28. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 11.

1 29. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 12.

1 30. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 13.

1 31. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 14.

1 32. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 15.

1 33. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 16.

1 34. A computer-readable medium carrying one or more sequences of instructions which,  
2 when executed by one or more processors, causes the one or more processors to perform the  
3 method recited in Claim 17.